

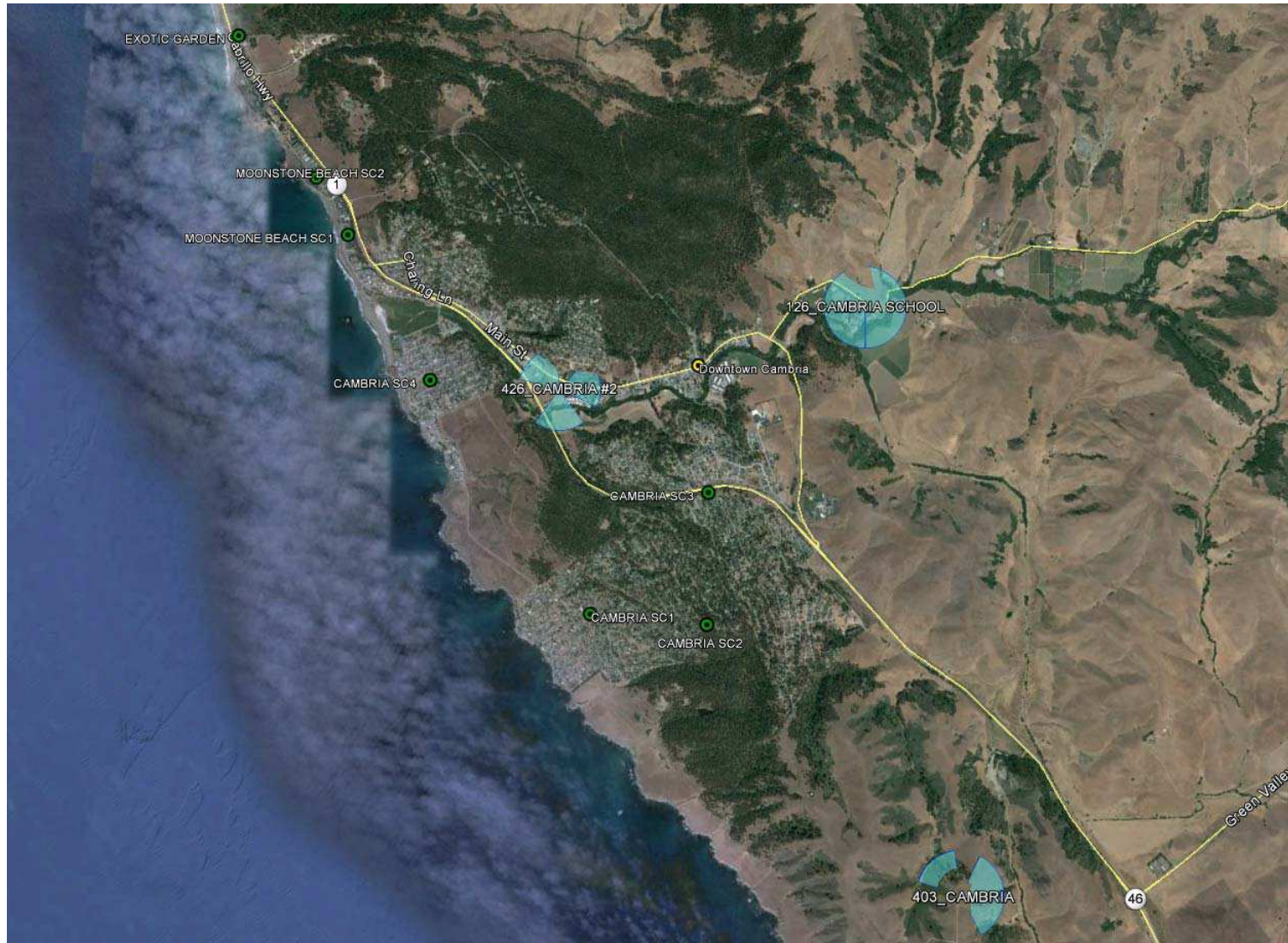


# Verizon Wireless Coverage Plan Cambria Master Plan

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Dewayne Bonham

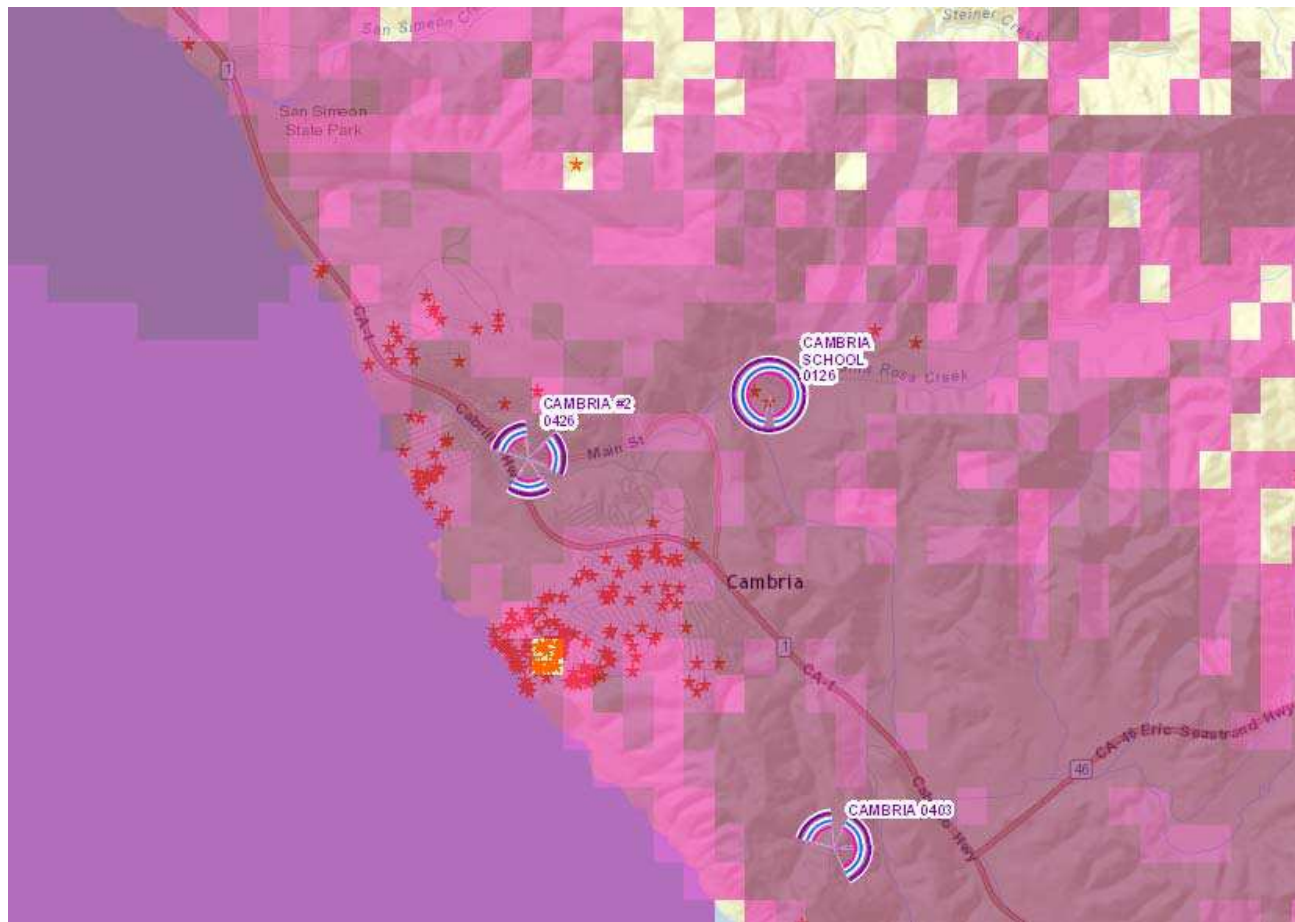
## Attachment 2

The map below shows the existing sites in blue, the currently active sites in green, and the proposed (3-5 years) sites in yellow. Downtown Cambria could be as soon as a 2016 start if funding is approved.



## Attachment 2

The map below shows a couple corresponding items that show the need for improvements in coverage in Cambria. Our three existing cell site are shown. The colors ranging from dark to light are levels of 3G voice coverage. 3G is shown because these are customers that will be impacted as voice service moves to LTE. Dark is good in building, as you move away from the cells you can see it step down a color and that would indicate marginal in-building/good in vehicle. The lighter would be good when standing outside and no color is no service. The stars are residences where customers have had to purchase Network Extenders to get 3G service inside their home. These Network Extenders do not improve LTE or on street coverage and would need to be replaced over the next few years as all services move to LTE. The newer phones will no longer have the chip that supports 3G so these will become useless with the next generation of phone. Without improving the LTE network both emergency services and customers will be seeing further reductions in service quality or complete loss of service.

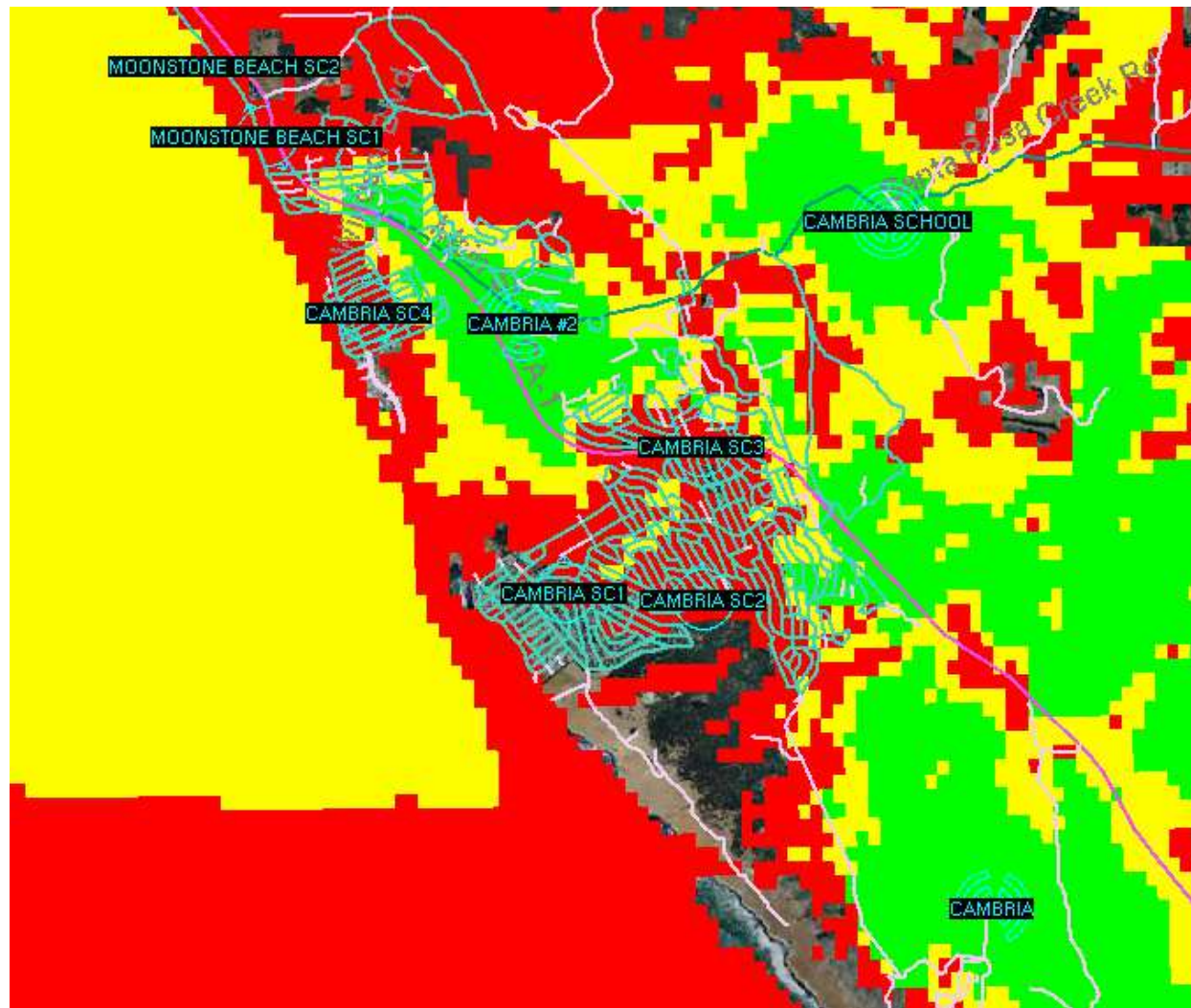




## Attachment 2

Existing LTE coverage. Note there are vast areas around the proposed sites where we show LTE service is not strong enough to support the VoLTE (Voice over LTE) service that will be the used in the next generation of phone. This means that where customers previously had at least some voice service or had enhanced their in-home service with a Network Extender, there will be no service.

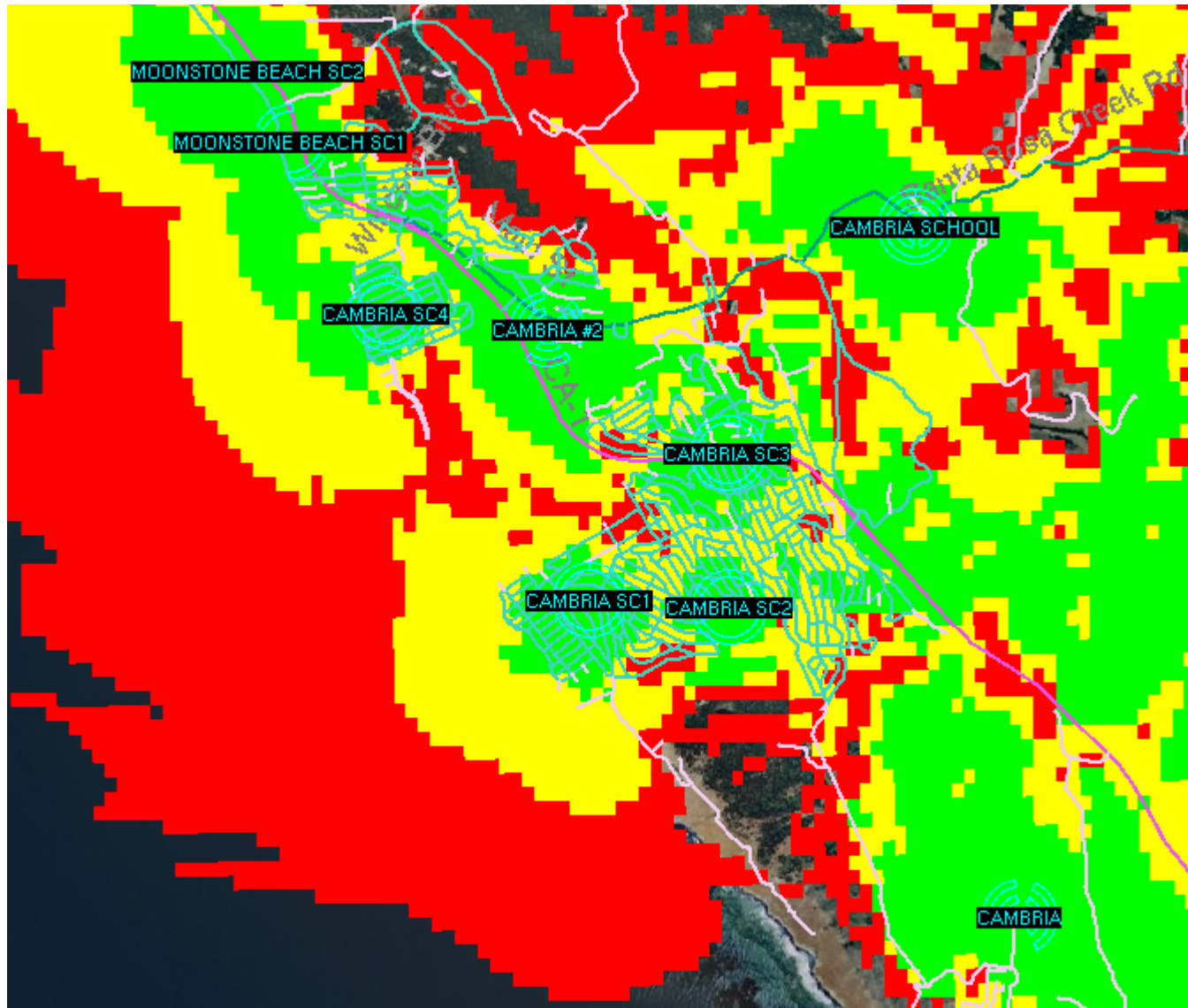
**\*\*This map is using the latest coverage mapping technology which may differ from previous maps.**



## Attachment 2

The map below show LTE coverage should we get all the proposed sites. While will still be some residential and a downtown coverage hole this plan should provide much improved coverage which will be required with the newer generation of handsets. Green is good in-building, Yellow is good in-vehicle, and Red is good outdoor coverage.

**\*\*This map is using the latest coverage mapping technology which may differ from previous maps.**



## Key Points:

- We may propose more sites if necessary once we get the currently proposed sites built and tested. This will be based on their actual performance, the communities needs, and how well we do at being a good neighbor. These site would likely be 5 years from being built and are subject to us finding a design that is acceptable to the community.
- The one remaining major residential hole will be in Cambria Pines. This would require about 2 more small cells to cover. While we see the need, we have not proposed them at this time.
- Cambria is a very tough area to cover, the hilly terrain, dense vegetation, ocean facing slope, and vast tracks of residential property present wireless carriers with a number of challenges. We are proposing what we feel is a good start in tackling these challenges.
- Part of the reason for partial plans is we never know in advance if a project will be moved, lowered, or have significant shadowing from a nearby tree until we are through zoning.

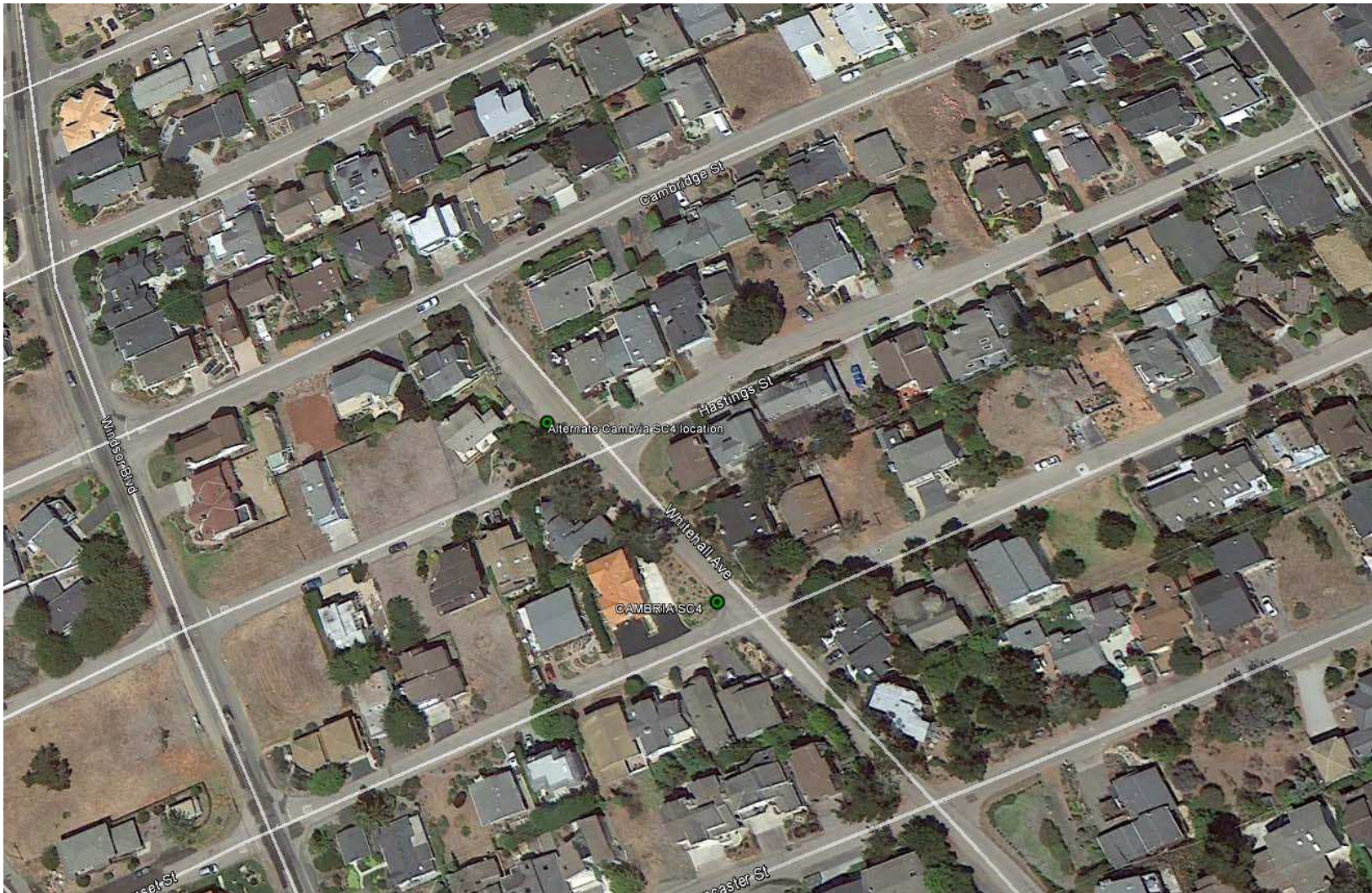
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## Proposed move of Cambria SC4

Due to their close proximity both poles will have very similar coverage. This will only be the case if the alternate has the antenna 6-8 feet above the adjacent tree. Nearby trees create shadows in the coverage pattern and with the pole against the tree coverage to the south of this location would be heavily impacted if not above the tree.





## Trouble Ticket Map

While we do show a concentration of Network Extenders and a both LTE and 3G coverage holes in the SC4 area, there have been no recent tickets from that particular area of Cambria. Tickets shown by grey pins.

